

ABSTRACT OF THE DISCLOSURE

A gyroscope having a rotor mounted onto a rotating shaft wherein the rotor has a circular flange extending from and perpendicular to one surface thereof. A suspension member having a flexible flange is affixed concentric with the rotating shaft and the rotor. A hysteresis synchronous electric drive motor is used for spinning the combined shaft with rotor. A light source is disposed on a stationary plate for emitting light perpendicular to a surface of the circular flange of the rotor. A light sensor is also disposed on the stationary plate and on a side of the circular flange opposite of the light source for producing an electrical signal as a function of the amount of light received. The light source and the light sensor are positioned such that only a portion of the light from the source strikes the sensor when the gyro is in a quiescent rotating state. However, when the rotor is tilted as a function of an angular force applied to the gyroscope, the amount of light received by the sensor varies thereby producing an electrical signal indicative of the angular force.